UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,034	01/16/2002	Todd Sarnstrom	6740-520	1251

32300 7590 04/01/2004

BRIGGS AND MORGAN, P.A.
2400 IDS CENTER
MINNEAPOLIS, MN 55402

EXAMINER	
HINZE, LEO T	

ART UNIT	PAPER NUMBER
2854	

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/052,034	SARNSTROM, TODD	
	Examiner	Art Unit	
	Leo T. Hinze	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7,9-22 and 24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7,9-22 and 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 December 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: '54' as described on page 10, line 31.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-5, 7, 9, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsburg, US 921,974 in view of Gerson, US 3,150,582.

Ginsburg teaches an interchangeable die apparatus, including:

- an apparatus for adjusting a die of a printing press, comprising: a chase (A, Fig. 1) defining a vertical axis and a horizontal axis; a die frame (B, Fig. 1) slidably secured to the

chase to allow the adjustment of the die frame in the vertical axis and the horizontal axis of the chase ("frame may be adjusted to its proper central position", p. 1 lines 62-63) (claim 1);

- the chase comprising an upper horizontal member, a lower horizontal member, a left vertical member secured to the upper horizontal member and the lower horizontal member and a right vertical member secured to the upper horizontal member and the lower horizontal member (A, Fig. 1) (claim 3);
- a method for adjusting a die of a printing press, comprising: providing a die; providing a die fixture including a chase defining a vertical and a horizontal axis, and a die frame slidably secured to the chase to allow the die frame to slide along the vertical axis and to be slid along the horizontal axis of the chase; mounting the die in the die frame; mounting the die fixture in the printing press (p. 1, lines 46-79) (claim 24).

Ginsburg does not teach:

- at least one of a coarse vertical adjustment and a coarse horizontal adjustment; and at least one of a fine vertical adjustment and a fine horizontal adjustment (claim 1);
- at least one horizontal guide secured within the chase; and at least one vertical guide secured in the chase, the at least one horizontal guide and the at least one vertical guide slidably connected to the die frame to slidably secure the die frame to the chase and to permit the die frame to be slidably positioned along both the at least one horizontal guide and the at least one vertical guide (claim 2);
- a vertical mount movably secured to the at least one vertical guide, with the die frame secured to the vertical slidable mount to slidably connect the die frame to the at least one

vertical guide; a horizontal mount movably secured to the at least one horizontal guide and secured to a first end of the at least one vertical guide; and a second end of the at least one vertical guide slidably secured to one of the upper horizontal member and the lower horizontal member of the chase to permit the horizontal movement of the second end the at least one vertical guide along one of the upper horizontal member and the lower horizontal member (claim 4);

- the second end of the at least one vertical guide secured to a sliding element to slidably secure the second end of the at least one vertical guide to one of the upper horizontal member and the lower horizontal member of the chase, the sliding element securedly attached to the second end of the at least one vertical guide and slidably attached to one of the upper horizontal member and the lower horizontal member (claim 5);
- at least one of a coarse vertical adjustment and a coarse horizontal adjustment (claim 7);

at least one of a fine vertical adjustment and a fine horizontal adjustment (claim 9);

- coarsely adjusting the position of the die by sliding the die along at least one of the vertical axis and the horizontal axis; and refining the position of the die by sliding the die along at least one of the vertical axis and the horizontal axis (claim 24);

Gerson teaches an apparatus for precisely positioning a template on a substrate, including:

- an apparatus for adjusting a die comprising: a vertical axis and a horizontal axis; a frame (36, Fig. 1) slidably secured to the chase to allow the adjustment of the frame in the vertical axis and the horizontal axis; at least one of a coarse vertical adjustment ("coarse adjustment in vertical displacement", col. 3, lines 39-40) and a coarse horizontal adjustment ("approximate or

coarse adjustment", col. 4, lines 7-8); and at least one of a fine vertical adjustment and a fine horizontal adjustment ("precise selection of fine space intervals both vertically and horizontally", col. 1, lines 55-56) (claim 1);

- at least one horizontal guide (80, Fig. 1); and at least one vertical guide (59, Fig. 1), the at least one horizontal guide and the at least one vertical guide slidably connected to the frame (36, Fig. 1) to slidably secure the frame to the chase and to permit the frame to be slidably positioned along both the at least one horizontal guide and the at least one vertical guide (col. 1, lines 45-50) (claim 2);
- a vertical mount (51, Fig. 1) movably secured to the at least one vertical guide, with the frame secured to the vertical slidable mount to slidably connect the frame to the at least one vertical guide; a horizontal mount (61, Fig. 1) movably secured to the at least one horizontal guide and secured to a first end of the at least one vertical guide; and a second end of the at least one vertical guide slidably secured to one of the upper horizontal member and the lower horizontal member of the chase to permit the horizontal movement of the second end the at least one vertical guide along one of the upper horizontal member and the lower horizontal member (claim 4);
- the second end of the at least one vertical guide secured to a sliding element to slidably secure the second end of the at least one vertical guide to one of the upper horizontal member and the lower horizontal member of the chase, the sliding element securedly attached to the second end of the at least one vertical guide and slidably attached to one of the upper horizontal member and the lower horizontal member (Fig. 1) (claim 5);

- at least one of a coarse vertical adjustment and a coarse horizontal adjustment ("coarse adjustment in vertical displacement", col. 3, lines 39-40) (claim 7);
- at least one of a fine vertical adjustment and a fine horizontal adjustment ("precise selection of fine space intervals both vertically and horizontally", col. 1, lines 55-56) (claim 9);
- coarsely adjusting the position of the die by sliding the die along at least one of the vertical axis and the horizontal axis ("coarse adjustment in vertical displacement", col. 3, lines 39-40); and refining the position of the die by sliding the die along at least one of the vertical axis and the horizontal axis ("precise selection of fine space intervals both vertically and horizontally", col. 1, lines 55-56) (claim 24).

Regarding claims 1-2, 4-5, 7, 9, and 24, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ginsburg to replace the set screws used to adjust the frame with the X-Y adjusting mechanism of Gerson, because Gerson teaches that such an adjusting system is well known in the art, and one having ordinary skill would recognize advantages of the Gerson adjusting mechanism, such as the ability to quickly adjust, precisely lock, and easily repeat the position of a frame using only two levers and a wheel, as opposed to the more complicated and less accurate system taught by Ginsburg.

Regarding claim 3, the combination of Ginsburg and Gerson teaches all that is claimed as discussed above.

4. Claims 10, 12, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg in view of Gerson as applied to claims 1 and 4 above, and further in view of Leibovich et al., US 4,723,086.

The combination of Ginsburg and Gerson teaches all that is claimed as discussed in the rejection of claims 1 and 4 above, except:

- at least one of the vertical guides comprising a spirally threaded vertical guide (claim 10);
- the spirally threaded vertical guide received in a vertical bore of the vertical mount in a gearing relationship such that when the vertical spirally threaded rod is rotated the vertical mount moves along the vertical axis of the chase (claim 12);
- at least one of the at least one horizontal guides comprising a spirally threaded horizontal guide (claim 17);
- the spirally threaded horizontal guide received in a horizontal bore of the horizontal mount in a gearing relationship such that when the spirally threaded horizontal guide is rotated, the horizontal mount moves along the horizontal axis of the chase (claim 18).

Leibovich et al. teach a mechanism allowing coarse and fine positioning (col. 1, lines 17-18) of a frame (65, Fig. 6) in X-Y directions, including:

- at least one of the vertical (58b, Fig. 6) and horizontal (58a, Fig. 6) guides comprising a spirally threaded vertical guide;
- the spirally threaded vertical guide received in a vertical bore of the vertical mount in a gearing relationship such that when the vertical spirally threaded rod is rotated the vertical mount moves along the vertical axis of the chase; and the spirally threaded horizontal guide received in a horizontal bore of the horizontal mount in a gearing relationship such that when the spirally threaded horizontal guide is rotated, the horizontal mount moves along the horizontal axis of the chase (col. 4, lines 55-67);

- that such a mechanism is advantageous for reducing complexity and subsequent cost, and provides better stability and better repeatability of the chosen position (col. 1, line 62 through column 2, line 1).

Regarding claims 10, 12, 17, and 18, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Ginsburg wherein at least one of the vertical and horizontal guides comprising a spirally threaded vertical guide, and wherein the spirally threaded vertical guide received in a vertical bore of the vertical mount in a gearing relationship such that when the vertical spirally threaded rod is rotated the vertical mount moves along the vertical axis of the chase; and the spirally threaded horizontal guide received in a horizontal bore of the horizontal mount in a gearing relationship such that when the spirally threaded horizontal guide is rotated, the horizontal mount moves along the horizontal axis of the chase, because Leibovich et al. teach that such an adjusting apparatus is advantageous for reducing complexity and subsequent cost, and provides better stability and better repeatability of the chosen position.

5. Claims 11, 13, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg in view of Gerson and Leibovich et al. as applied to claims 10, 12, and 18 above, and further in view of Posh, US 3,449,971.

The combination of Ginsberg, Gerson, and Leibovich et al. teaches all that is claimed as discussed in the rejection of claims 10, 12, and 18 above, except:

- a vertical fine adjustment, the vertical fine adjustment including a spur gear and a worm gear, the spur gear attached to the spirally threaded vertical guide and the worm gear meshing

with the spur gear such that the spur gear rotates the spirally threaded vertical rod when the worm gear is rotated (claims 11 and 13);

- a fine horizontal adjustment, the fine horizontal adjustment including a spur gear attached to the spirally threaded horizontal guide, and a worm gear, with the worm gear meshing with the spur gear such that, when the worm gear is rotated, the spur gear rotates the spirally threaded horizontal guide to move the horizontal mount along the horizontal axis of the chase (claim 19).

Posh teaches a linear actuator (10, Fig. 1) with a worm gear (32, Fig. 2) meshing with a pair of spur gears (18, 20, Fig. 1), such that when the worm gear is rotated, the spur gear rotates a spirally threaded shaft (12, Fig. 1), to cause relative motion between the rod and the housing (14, Fig. 1). Posh teaches that such an actuator is advantageous for very precise movements (col. 3, lines 30-32) and is very compact (col. 1, line 32).

Regarding claims 11, 13, and 19, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Ginsburg to use for the fine horizontal and vertical adjustments an actuator with a worm gear and a spur gear and a shaft attached to the spur gear and movable when the worm gear is rotated, because Posh teaches that such an actuator is advantageous for generating very precise movements and is very compact.

6. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg in view of Gerson and Leibovich et al. as applied to claims 10 and 12 above, and further in view of Gortner, US 6,598,868.

The combination of Ginsberg, Gerson, and Leibovich et al. teaches all that is claimed as discussed in the rejection of claims 10, 12, and 18 above, except:

- a coarse vertical adjustment, the coarse adjustment including a vertical actuator movably received within a vertical actuator receiving cavity in the vertical mount and having an at least partially threaded bore extending through the vertical actuator, the at least partially threaded bore including receiving threads and being coextensive with the vertical bore of the vertical mount, the at least partially threaded bore providing the gearing relationship with the spirally threaded vertical guide, and the at least partially threaded bore being sized to release the spirally threaded vertical guide when the vertical actuator is displaced relative to the vertical mount (claim 14);
- the receiving threads of the partially threaded bore biased in a gearing relationship with the spirally threaded vertical guide by a compressible element biased between a bottom surface of the vertical actuator and a bottom of the cavity in the vertical mount (claim 15);
- the compressible element comprising a coiled spring (claim 16).

Gortner teaches a method of coarsely adjusting a device on a threaded rod, including:

- a coarse adjustment, the coarse adjustment including an actuator (115, Fig. 17) movably received within an actuator receiving cavity (117, Fig. 17) in the mount (118, Fig. 17) and having an at least partially threaded bore (122, Fig. 17) extending through the actuator, the at least partially threaded bore including receiving threads (Figs. 17 and 18) and being coextensive with the bore of the mount, the at least partially threaded bore providing the gearing relationship with the spirally threaded guide (121, Fig. 17), and the at least partially

threaded bore being sized to release the spirally threaded guide when the actuator is displaced relative to the mount (claim 14);

- the receiving threads of the partially threaded bore biased in a gearing relationship with the spirally threaded guide by a compressible element (123, Fig. 17) biased between a bottom surface of the actuator and a bottom of the cavity in the mount (claim 15);
- the compressible element comprising a coiled spring (123, Fig. 17) (claim 16);
- that such an adjustment mechanism, when actuated, frees the mount for displacement along the length of the threaded rods (col. 2, lines 48-49).

Regarding claims 14-16, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Ginsburg to include a coarse adjustment actuator as taught by Gortner, because Gortner teaches that such an actuator mechanism is advantageous for freeing a mount for displacement along the length of a threaded rod, and that such a mechanism is well known in the art, and one having ordinary skill in the art would recognize that such a mechanisms is a suitable alternative to the actuating mechanism of Ginsburg.

7. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg in view of Gerson, Leibovich et al., and Posh as applied to claim 19 above, and further in view of, Gortner, US 6,598,868.

The combination of Ginsberg, Gerson, Leibovich et al., and Posh teaches all that is claimed as discussed in the rejection of claim 19 above, except:

- a coarse horizontal adjustment, the coarse adjustment including a horizontal actuator movably received within a horizontal actuator receiving cavity in the horizontal mount and

having an at least partially threaded bore extending through the actuator, the at least partially threaded bore including receiving threads and being coextensive with the horizontal bore of the horizontal mount, the at least partially threaded bore providing the gearing relationship with the spirally threaded horizontal guide, and the at least partially threaded bore being sized to release the spirally threaded vertical guide when the horizontal actuator is displaced relative to the horizontal mount (claim 20);

- 2 the receiving threads of the partially threaded bore biased in a gearing relationship with the spirally threaded horizontal guide by a compressible element biased between a bottom surface of the horizontal actuator and a bottom of the cavity in the horizontal mount (claim 21);
- the compressible element comprising a coiled spring (claim 22).

Gortner teaches a method of coarsely adjusting a device on a threaded rod, including:

- a coarse adjustment, the coarse adjustment including an actuator (115, Fig. 17) movably received within an actuator receiving cavity (117, Fig. 17) in the mount (118, Fig. 17) and having an at least partially threaded bore (122, Fig. 17) extending through the actuator, the at least partially threaded bore including receiving threads (Figs. 17 and 18) and being coextensive with the bore of the mount, the at least partially threaded bore providing the gearing relationship with the spirally threaded guide (121, Fig. 17), and the at least partially threaded bore being sized to release the spirally threaded guide when the actuator is displaced relative to the mount (claim 20);

- the receiving threads of the partially threaded bore biased in a gearing relationship with the spirally threaded guide by a compressible element (123, Fig. 17) biased between a bottom surface of the actuator and a bottom of the cavity in the mount (claim 21);
- the compressible element comprising a coiled spring (123, Fig. 17) (claim 22);
- that such an adjustment mechanism, when actuated, frees the mount for displacement along the length of the threaded rods (col. 2, lines 48-49).

Regarding claims 20-22, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Ginsburg to include a coarse adjustment actuator as taught by Gortner, because Gortner teaches that such an actuator mechanism is advantageous for freeing a mount for displacement along the length of a threaded rod, and that such a mechanism is well known in the art, and one having ordinary skill in the art would recognize that such a mechanisms is a suitable alternative to the actuating mechanism of Ginsburg.

Double Patenting

8. Applicant is advised that should claims 1, 7, and 9 be found allowable, claims 7 and 9 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Response to Arguments

9. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is (571) 272-2167. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo T. Hinze
Patent Examiner
AU 2854
24 March, 2004

ANDREW H. HIRSHFELD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800